

**Re: Dairy Lagoons** **Thomas Eaton** to: Mena, Nora (AGR)

11/21/2012 08:43 AM

Cc: Eric Winiecki, "Cook, Kirk (AGR)", Marie Jennings, "Maxwell, Ted (AGR)", "Clark, Mark (WSCC)", anderson.karma

From: Thomas Eaton/R10/USEPA/US  
To: "Mena, Nora (AGR)" <NMena@agr.wa.gov>  
Cc: Eric Winiecki/R10/USEPA/US@EPA, "Cook, Kirk (AGR)" <KCook@agr.wa.gov>, Marie Jennings/R10/USEPA/US@EPA, "Maxwell, Ted (AGR)" <TMaxwell@agr.wa.gov>, "Clark, Mark (WSCC)" <MClark@scc.wa.gov>, anderson.karma@epa.gov

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History: This message has been forwarded.

Hi Nora,

I have been meaning to get back to you regarding the string of e-mails below on Washington's requirements for lagoon or waste impoundment lining. I have been digging into this a little deeper and am still unclear as to what is required and what is the current status of liners for dairy waste impoundments in Washington.

I have read the NRCS practice guidelines and they are not the type of standard that could just be handed to a contractor to construct a waste impoundment. The guidelines include a lot of qualitative considerations for an engineer to take into account to make sure that groundwater is not being polluted. These considerations could lead to thicker, less permeable, clay liners, the addition of soil amendments such as bentonite, flexible membrane liners or concrete basins. Does the CD cluster engineer go through this type of evaluation for all waste impoundments, particularly in areas like Yakima and Whatcom County that have documented groundwater contamination problems?

I have at least one example of a DNMP approved with a statement that the lagoons/waste impoundments met NRCS standards *at the time of construction*, not at the time of plan approval. Are you certain that the approval of a DNMP ensures that all current NRCS practices are being met?

If the NRCS practices for waste impoundments are being interpreted as one foot of compacted clay with a permeability of no greater than 10-6, are the CD cluster engineers reviewing/inspecting the lagoon construction to assure that it is at least meeting this requirement? Waste impoundments requires careful attention during construction to ensure uniform thickness of the lining, proper compaction, etc. I would argue that the one foot clay liner is too simple of an interpretation of the NRCS practices, particularly for areas like Yakima and Whatcom County with documented groundwater contamination, but it would be helpful to know if even this practice is being followed.

Let me know if you can shed any light on these questions.

Tom Eaton  
Director  
Washington Operations Office  
USEPA, Region 10  
360-753-8086

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"Mena, Nora (AGR)"

Hi Tom, the approval and certification of plans...

10/31/2012 10:23:14 AM

From: "Mena, Nora (AGR)" <NMena@agr.wa.gov>  
To: Thomas Eaton/R10/USEPA/US@EPA  
Cc: Eric Winiecki/R10/USEPA/US@EPA, "Cook, Kirk (AGR)" <KCook@agr.wa.gov>, Marie Jennings/R10/USEPA/US@EPA, "Maxwell, Ted (AGR)" <TMaxwell@agr.wa.gov>  
Date: 10/31/2012 10:23 AM

Subject: Re: Dairy Lagoons

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Hi Tom, the approval and certification of plans has been a closely guarded role of the CDs. The local CD staff are well aware of that responsibility. They did (do?) share office space with NRCS and had access to their files when planning. They were not able to keep copies of any NRCS documents in the CD farm file.

So they would have verification at the time of the lagoon meeting the current standard, but not the details.

As I said before, any state funded or private work also has to meet standards at the time. The CD or CD cluster engineer would review the information on the lagoon and any other engineering elements for consistency.

Nora

**From:** Eaton.Thomas@epamail.epa.gov [mailto:Eaton.Thomas@epamail.epa.gov]  
**Sent:** Wednesday, October 31, 2012 06:38 AM  
**To:** Mena, Nora (AGR)  
**Cc:** Winiecki.Eric@epamail.epa.gov <Winiecki.Eric@epamail.epa.gov>; Cook, Kirk (AGR); Jennings.Marie@epamail.epa.gov <Jennings.Marie@epamail.epa.gov>; Maxwell, Ted (AGR)  
**Subject:** RE: Dairy Lagoons

Has anyone checked with the local CD to make sure that they understand that their certification of the plan means that they certified that the lagoon liners meet NRCS standards?

Tom Eaton  
Director  
Washington Operations Office  
USEPA, Region 10  
360-753-8086

▼ "Mena, Nora (AGR)" ---10/30/2012 05:59:55 PM---Hi Eric, when a plan is approved the elements need to meet the NRCS standard in effect at the time.

From: "Mena, Nora (AGR)" <NMena@agr.wa.gov>  
To: Eric Winiecki/R10/USEPA/US@EPA  
Cc: Thomas Eaton/R10/USEPA/US@EPA, Marie Jennings/R10/USEPA/US@EPA, "Maxwell, Ted (AGR)" <TMaxwell@agr.wa.gov>, "Cook, Kirk (AGR)" <KCook@agr.wa.gov>  
Date: 10/30/2012 05:59 PM  
Subject: RE: Dairy Lagoons

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Hi Eric,  
when a plan is approved the elements need to meet the NRCS standard in effect at the time. See my note below with the certification dates for the dairies. Hope this helps.

Nora

Nora Mena  
Program Manager  
Dairy Nutrient Management Program

WA Department of Agriculture  
(360) 902-2894  
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"Sometimes you just have to take the leap,  
and build your wings on the way down..."

Kobi Yamada

**From:** Winiecki.Eric@epamail.epa.gov [<mailto:Winiecki.Eric@epamail.epa.gov>]  
**Sent:** Tuesday, October 30, 2012 9:37 AM  
**To:** Mena, Nora (AGR)  
**Cc:** Eaton.Thomas@epamail.epa.gov; Jennings.Marie@epamail.epa.gov  
**Subject:** Dairy Lagoons

Hi Nora,

Are you saying that all Washington dairies that have an approved Nutrient Management Plan have all their lagoons constructed to meet the current NRCS permeability standard of  $1 \times 10^{-6}$  cm/sec? As you know, we're most interested in the following dairies:

Year approved NMP was certified as implemented

Liberty/Bosma 1998, 2008

Cow Palace 2009

DeRuyter 2010

D and A Dairy 2010

R&M Haak Diary 2002

Based on the statute, except for the 1998 plan, the other facility plans should not have been approved and certified unless the lagoon met the 2001 or 2004 NRCS standard for lagoons. They specify that a liner is required if the underlying soil exceeds  $10^{-6}$  permeability. The liner must also not exceed  $10^{-6}$  permeability.

If the Department of Agriculture has any records showing that these dairies have lagoons/waste storage ponds that are designed or constructed to meet a specific permeability standard, we'd be interested if you can share them with us. We've asked the dairies for this information but we're still waiting.

Thanks,

Eric

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From: "Mena, Nora (AGR)" <[NMenya@agr.wa.gov](mailto:NMenya@agr.wa.gov)>  
To: Thomas Eaton/R10/USEPA/US@EPA  
Cc: "Ford, Jaclyn (AGR)" <[JFord@agr.wa.gov](mailto:JFord@agr.wa.gov)>, "Maxwell, Ted (AGR)" <[TMaxwell@agr.wa.gov](mailto:TMaxwell@agr.wa.gov)>  
Date: 10/23/2012 04:06 PM  
Subject: RE: Dairy lagoons

Hi Tom,

there is not a specific lagoon requirement but a general requirement to use NRCS practice standards. Check 90.64.026(3) which in a backwards way established NRCS as the practice standards unless the commission authorizes something else - and they have not.

90.64.026(2) directs the Commission to develop the DNMP elements necessary for approval. I've attached a copy of the list as developed and used by all CDs as the basis for approval. You will see that the first element is that NRCS practice standards and methods are to be used. Another element addresses storage.

Between these two sections, lagoon storage is required to meet NRCS standards. Hope this answers your question.  
Nora

Nora Mena  
Program Manager  
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